

ABSTRACT

The present invention provides a chemiluminescence enhancer treated to retain favorable dispersibility of fine solid carriers and stably exert a chemiluminescence enhancing action. The invention provides a chemiluminescence enhancer used for signal detection in a solid phase immunoassay using antigen or/and antibody immobilized onto fine solid carriers dispersible in a liquid medium, consisting of a water soluble macromolecular quaternary ammonium salt, a quaternary sulfonium salt or a quaternary phosphonium salt in order to enhance emission of light caused by an enzymatic reaction of a chemiluminescent substrate having dioxetane, wherein the chemiluminescence enhancer is given an aggregation inhibition treatment of the fine solid carriers by the treatment with an oxidizing agent or a reducing agent, and a chemiluminescence method and a kit using the chemiluminescence enhancer.